



INNOVATIVE ACTIVITY-BASED COSTING APPROACH MAKES SMALL MANUFACTURING COMPANIES MORE COMPETITIVE

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Payoff

By assigning job costs based on the actual use of firm resources, the activity-based costing (ABC) approach facilitates a faster conversion of small companies to ABC implementation and strengthens small business infrastructure vital to maintaining a strong defense.

Accomplishment

Engineers at the Materials and Manufacturing Directorate (ML), working with the Industrial Technology Institute of Ann Arbor, MI, have effectively demonstrated that an ABC approach can allow small companies to determine the commercial and military markets which they can successfully compete and bid, while strengthening small business infrastructure. They determined and quantified the costs and benefits associated with using ABC in a small company environment in support of a faster, simplified manufacturing strategy.

Background

In a traditional manufacturing cost accounting system, overhead costs such as set up, material handling and engineering are accumulated into overhead accounts, then allocated to products based on the amount of direct labor each product requires. This approach worked well a few decades ago when direct labor was a large part of the costs. Today, however, firms that make the significant investment in agile technologies often find themselves less profitable and their market reduced when they fail to consider the impact of these new technologies on their cost structuring. ABC offers a solution to the problem by assigning job costs based on the actual use of firm resources. The central objective of the Directorate's approach was to determine and quantify the costs and benefits associated with using ABC in a small company environment, to support an agile manufacturing strategy. This effort was conducted in five steps. First, six small to medium-sized companies, composed equally of plastic parts processors and machining firms, were selected to serve as study and implementation sites. Next, a conceptual outline of each of the company's cost-flow patterns within an ABC structure was constructed. These served as blueprints for developing a day-to-day cost accounting system that was activity-based and accurately reflected the costs of the products and business unit process. Third, a computer-based cost accumulation model of the company that stimulates the ABC flows was constructed. This model provided accurate and relevant product costing rates and served as a tool for calculating incremental costs resulting from potential courses of action. Fourth, "as-is" and "to-be" differences were analyzed in order to determine significant improvements, significant cost increases and other significant changes that could be used to determine the effectiveness of ABC in gathering accurate job costs. Finally, the researchers presented the implementation process to interested companies.